

the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, and the Virgin Islands.

**(9) State component**

The term “State component” means the State component of the geologic mapping program described in section 31e(d)(2)<sup>3</sup> of this title.

**(10) Survey**

The term “Survey” means the United States Geological Survey.

(Pub. L. 102–285, § 3, May 18, 1992, 106 Stat. 167; Pub. L. 105–36, § 3(a), Aug. 5, 1997, 111 Stat. 1107; Pub. L. 106–148, § 3, Dec. 9, 1999, 113 Stat. 1719.)

AMENDMENTS

1999—Pars. (4) to (10). Pub. L. 106–148 added pars. (4), (5), and (9) and redesignated former pars. (4), (5), (6), and (7) as (6), (7), (8), and (10), respectively.

1997—Pub. L. 105–36, § 3(a)(1), substituted “In sections 31a to 31h of this title:” for “As used in sections 31a to 31h of this title:” in introductory provisions.

Par. (1). Pub. L. 105–36, § 3(a)(5), inserted heading.

Par. (2). Pub. L. 105–36, § 3(a)(2), (3), added par. (2). Former par. (2) redesignated (3).

Pars. (3) to (5). Pub. L. 105–36, § 3(a)(2), (5), redesignated pars. (2) to (4) as (3) to (5), respectively, and inserted headings. Par. (5) redesignated (7).

Par. (6). Pub. L. 105–36, § 3(a)(4), added par. (6).

Par. (7). Pub. L. 105–36, § 3(a)(2), (5), redesignated par. (5) as (7) and inserted heading.

**§ 31c. Geologic mapping program**

**(a) Establishment**

**(1) In general**

There is established a national cooperative geologic mapping program between the United States Geological Survey and the State geological surveys, acting through the Association.

**(2) Design, development, and administration**

The cooperative geologic mapping program shall be—

(A) designed and administered to achieve the objectives set forth in subsection (c) of this section;

(B) developed in consultation with the advisory committee; and

(C) administered through the Survey.

**(b) Responsibilities of the Survey**

**(1) Lead agency**

The Survey shall be the lead Federal agency responsible for planning, developing national priorities and standards for, coordinating, and managing the geologic mapping program. In carrying out this paragraph, the Secretary, acting through the Director, shall—

(A) develop a 5-year strategic plan for the geologic mapping program in accordance with section 31e of this title, which plan shall be submitted to the Committee on Resources of the House of Representatives and the Committee on Energy and Natural Resources of the Senate not later than 1 year after December 9, 1999;

(B) appoint, with the advice and consultation of the Association, the advisory com-

mittee not later than 1 year after December 9, 1999, in accordance with section 31d of this title; and

(C) not later than 3 years after December 9, 1999, and biennially thereafter, submit a report to the Committee on Energy and Natural Resources of the United States Senate and to the Committee on Resources of the House of Representatives identifying—

(i) how the Survey and the Association are coordinating the development and implementation of the geologic mapping program;

(ii) how the Survey and the Association establish goals, mapping priorities, and target dates for implementation of the geologic mapping program; and

(iii) how long-term staffing plans for the various components of the geologic mapping program affect successful implementation of the geologic mapping program.

**(2) Responsibilities of the Secretary**

In addition to paragraph (1), the Secretary, acting through the Director, shall be responsible for developing, as soon as practicable—

(A) in cooperation with the Association, other Federal and State agencies, public and private sector organizations and academia, the geologic-map data base; and

(B) maps and mapping techniques which achieve the objectives specified in subsection (c) of this section.

**(c) Program objectives**

The objectives of the geologic mapping program shall include—

(1) determining the Nation’s geologic framework through systematic development of geologic maps at scales appropriate to the geologic setting and the perceived applications, such maps to be contributed to the national geologic map data base;

(2) development of a complementary national geophysical-map data base, geochemical-map data base, and a geochronologic and paleontologic data base that provide value-added descriptive and interpretative information to the geologic-map data base;

(3) application of cost-effective mapping techniques that assemble, produce, translate and disseminate geologic-map information and that render such information of greater application and benefit to the public; and

(4) development of public awareness of the role and application of geologic-map information to the resolution of national issues of land use management.

**(d) Program components**

**(1) Federal component**

**(A) In general**

The geologic mapping program shall include a Federal geologic mapping component, the objective of which shall be to determine the geologic framework of areas determined to be vital to the economic, social, environmental, or scientific welfare of the United States.

**(B) Mapping priorities**

For the Federal component, mapping priorities—

<sup>3</sup> So in original. Probably should be section “31c(d)(2)”.

- (i) shall be described in the 5-year plan under section 31e of this title; and
- (ii) shall be based on—

(I) national requirements for geologic map information in areas of multiple-issue need or areas of compelling single-issue need; and

(II) national requirements for geologic map information in areas where mapping is required to solve critical earth science problems.

**(C) Interdisciplinary studies**

**(i) In general**

The Federal component shall include interdisciplinary studies that add value to geologic mapping.

**(ii) Representative categories**

Interdisciplinary studies under clause (i) may include—

(I) establishment of a national geologic map database under section 31f of this title;

(II) studies that lead to the implementation of cost-effective digital methods for the acquisition, compilation, analysis, cartographic production, and dissemination of geologic map information;

(III) paleontologic, geochronologic, and isotopic investigations that provide information critical to understanding the age and history of geologic map units;

(IV) geophysical investigations that assist in delineating and mapping the physical characteristics and 3-dimensional distribution of geologic materials and geologic structures; and

(V) geochemical investigations and analytical operations that characterize the composition of geologic map units.

**(iii) Use of results**

The results of investigations under clause (ii) shall be contributed to national databases.

**(2) State component**

**(A) In general**

The geologic mapping program shall include a State geologic mapping component, the objective of which shall be to establish the geologic framework of areas determined to be vital to the economic, social, environmental, or scientific welfare of individual States.

**(B) Mapping priorities**

For the State component, mapping priorities—

- (i) shall be determined by State panels representing a broad range of users of geologic maps; and
- (ii) shall be based on—

(I) State requirements for geologic map information in areas of multiple-issue need or areas of compelling single-issue need; and

(II) State requirements for geologic map information in areas where mapping is required to solve critical earth science problems.

**(C) Integration of Federal and State priorities**

A national panel including representatives of the Survey shall integrate the State mapping priorities under this paragraph with the Federal mapping priorities under paragraph (1).

**(D) Use of funds**

The Survey and recipients of grants under the State component shall not use more than 15.25 percent of the Federal funds made available under the State component for any fiscal year to pay indirect, servicing, or program management charges.

**(E) Federal share**

The Federal share of the cost of activities under the State component for any fiscal year shall not exceed 50 percent.

**(3) Education component**

**(A) In general**

The geologic mapping program shall include a geologic mapping education component for the training of geologic mappers, the objectives of which shall be—

(i) to provide for broad education in geologic mapping and field analysis through support of field studies; and

(ii) to develop academic programs that teach students of earth science the fundamental principles of geologic mapping and field analysis.

**(B) Investigations**

The education component may include the conduct of investigations, which—

(i) shall be integrated with the Federal component and the State component; and

(ii) shall respond to mapping priorities identified for the Federal component and the State component.

**(C) Use of funds**

The Survey and recipients of grants under the education component shall not use more than 15.25 percent of the Federal funds made available under the education component for any fiscal year to pay indirect, servicing, or program management charges.

**(D) Federal share**

The Federal share of the cost of activities under the education component for any fiscal year shall not exceed 50 percent.

(Pub. L. 102-285, § 4, May 18, 1992, 106 Stat. 167; Pub. L. 103-437, § 16(a)(1), Nov. 2, 1994, 108 Stat. 4594; Pub. L. 105-36, § 3(b), Aug. 5, 1997, 111 Stat. 1108; Pub. L. 106-148, § 4, Dec. 9, 1999, 113 Stat. 1720.)

AMENDMENTS

1999—Subsec. (b)(1). Pub. L. 106-148, § 4(1)(A), substituted “national priorities and standards for” for “priorities” in first sentence.

Subsec. (b)(1)(A). Pub. L. 106-148, § 4(1)(B), substituted “develop a 5-year strategic plan for the geologic mapping program” for “develop a geologic mapping program implementation plan” and “not later than 1 year after December 9, 1999” for “within 300 days after August 5, 1997”.

Subsec. (b)(1)(B). Pub. L. 106-148, § 4(1)(C), substituted “not later than 1 year after December 9, 1999,” for “within 90 days after August 5, 1997,”.

Subsec. (b)(1)(C). Pub. L. 106-148, §4(1)(D)(i), substituted “not later than 3 years after December 9, 1999, and biennially thereafter” for “within 210 days after August 5, 1997” in introductory provisions.

Subsec. (b)(1)(C)(i). Pub. L. 106-148, §4(1)(D)(ii), substituted “are coordinating” for “will coordinate”.

Subsec. (b)(1)(C)(ii). Pub. L. 106-148, §4(1)(D)(iii), substituted “establish” for “will establish”.

Subsec. (b)(1)(C)(iii). Pub. L. 106-148, §4(1)(D)(iv), substituted “affect” for “will lead to”.

Subsec. (d). Pub. L. 106-148, §4(2), added subsec. (d) and struck out former subsec. (d) which set out the Federal, support, State, and education components of the geological mapping program.

1997—Subsec. (a). Pub. L. 105-36, §3(b)(1), added subsec. (a) and struck out heading and text of former subsec. (a). Text read as follows: “There is established in the United States Geological Survey a National Cooperative Geologic Mapping Program. The geologic mapping program shall be developed in consultation with the advisory committee and shall be designed and administered to achieve the objectives set forth in subsection (c) of this section.”

Subsec. (b). Pub. L. 105-36, §3(b)(2)(A), (D), substituted “the Survey” for “USGS” in heading and realigned text margins.

Subsec. (b)(1). Pub. L. 105-36, §3(b)(2)(B)(i), (ii), inserted heading and realigned margins.

Subsec. (b)(1)(A). Pub. L. 105-36, §3(b)(2)(B)(iii), substituted “Committee on Resources” for “Committee on Natural Resources” and “August 5, 1997” for “May 18, 1992”.

Subsec. (b)(1)(B). Pub. L. 105-36, §3(b)(2)(B)(iv), substituted “Association” for “State geological surveys” and “August 5, 1997” for “May 18, 1992”.

Subsec. (b)(1)(C). Pub. L. 105-36, §3(b)(2)(B)(v)(I), (II), in introductory provisions, substituted “August 5, 1997” for “May 18, 1992” and “Committee on Resources” for “Committee on Natural Resources”.

Subsec. (b)(1)(C)(i). Pub. L. 105-36, §3(b)(2)(B)(v)(III), inserted “and the Association” after “the Survey”.

Subsec. (b)(1)(C)(ii). Pub. L. 105-36, §3(b)(2)(B)(v)(III), (IV), inserted “and the Association” after “the Survey” and “and” after semicolon at end.

Subsec. (b)(1)(C)(iii), (iv). Pub. L. 105-36, §3(b)(2)(B)(v)(V), substituted period for “; and” at end of cl. (iii) and struck out cl. (iv) which read as follows: “the degree to which geologic mapping activities traditionally funded by the Survey, including the use of commercially available aerial photography, geodesy, professional land surveying, photogrammetric mapping, cartography, photographic processing, and related services, can be contracted to professional private mapping firms.”

Subsec. (b)(2). Pub. L. 105-36, §3(b)(2)(C)(i), inserted heading.

Subsec. (b)(2)(A). Pub. L. 105-36, §3(b)(2)(C)(ii), substituted “Association” for “State geological surveys”.

Subsec. (c)(2). Pub. L. 105-36, §3(b)(3)(A), substituted “interpretative information” for “interpretive information”.

Subsec. (c)(4). Pub. L. 105-36, §3(b)(3)(B), substituted “public awareness of” for “public awareness for”.

Subsec. (d)(1). Pub. L. 105-36, §3(b)(4)(A), inserted heading.

Subsec. (d)(2). Pub. L. 105-36, §3(b)(4)(B)(i), inserted heading.

Subsec. (d)(2)(D). Pub. L. 105-36, §3(b)(4)(B)(ii), added subpar. (D) and struck out former subpar. (D) which read as follows: “geochronologic and isotopic investigations that (i) provide radiometric age dates for geologic-map units and (ii) fingerprint the geothermometry, geobarometry, and alteration history of geologic-map units, which investigations shall be contributed to a national geochronologic data base;”.

Subsec. (d)(3). Pub. L. 105-36, §3(b)(4)(C), inserted heading.

Subsec. (d)(4). Pub. L. 105-36, §3(b)(4)(D), added par. (4) and struck out former par. (4) which read as follows: “A geologic mapping education component, whose objective shall be—

“(A) to develop the academic programs that teach earth-science students the fundamental principles of geologic mapping and field analysis; and

“(B) to provide for broad education in geologic mapping and field analysis through support of field teaching institutes.

Investigations conducted under the geologic mapping education component shall be integrated with the other mapping components of the geologic mapping program, and shall respond to priorities identified for those components.”

1994—Subsec. (b)(1)(A), (C). Pub. L. 103-437 substituted “Natural Resources” for “Interior and Insular Affairs” before “of the House”.

## § 31d. Advisory committee

### (a) Establishment

#### (1) In general

There shall be established a 10-member geologic mapping advisory committee to advise the Director on planning and implementation of the geologic mapping program.

#### (2) Members ex officio

Federal agency members shall include the Administrator of the Environmental Protection Agency or a designee, the Secretary of Energy or a designee, the Secretary of Agriculture or a designee, and the Assistant to the President for Science and Technology or a designee.

#### (3) Appointed members

Not later than 1 year after December 9, 1999, in consultation with the Association, the Secretary shall appoint to the advisory committee two representatives from the Survey (including the Chief Geologist, as Chairman), two representatives from the State geological surveys, one representative from academia, and one representative from the private sector.

### (b) Duties

The advisory committee shall—

(1) review and update the 5-year plan prepared by the Director pursuant to section 31e of this title;

(2) review the scientific progress of the geologic mapping program; and

(3) submit an annual report to the Secretary that evaluates the progress of the Federal, State, and university mapping activities and evaluates the progress made toward fulfilling the purposes of sections 31c through 31f of this title.

(Pub. L. 102-285, §5, May 18, 1992, 106 Stat. 169; Pub. L. 105-36, §3(c), Aug. 5, 1997, 111 Stat. 1110; Pub. L. 106-148, §5, Dec. 9, 1999, 113 Stat. 1722.)

#### AMENDMENTS

1999—Subsec. (a)(3). Pub. L. 106-148, §5(1), substituted “1 year after December 9, 1999,” for “90 days after August 5, 1997,”.

Subsec. (b)(1). Pub. L. 106-148, §5(2)(A), substituted “update the 5-year plan” for “critique the draft implementation plan”.

Subsec. (b)(3). Pub. L. 106-148, §5(2)(B), substituted “sections 31c through 31f of this title” for “sections 31a to 31h of this title”.

1997—Subsec. (a). Pub. L. 105-36, §3(c)(1), added subsec. (a) and struck out heading and text of former subsec. (a). Text read as follows: “There shall be established a sixteen member geologic mapping advisory committee to advise the Director on planning and im-